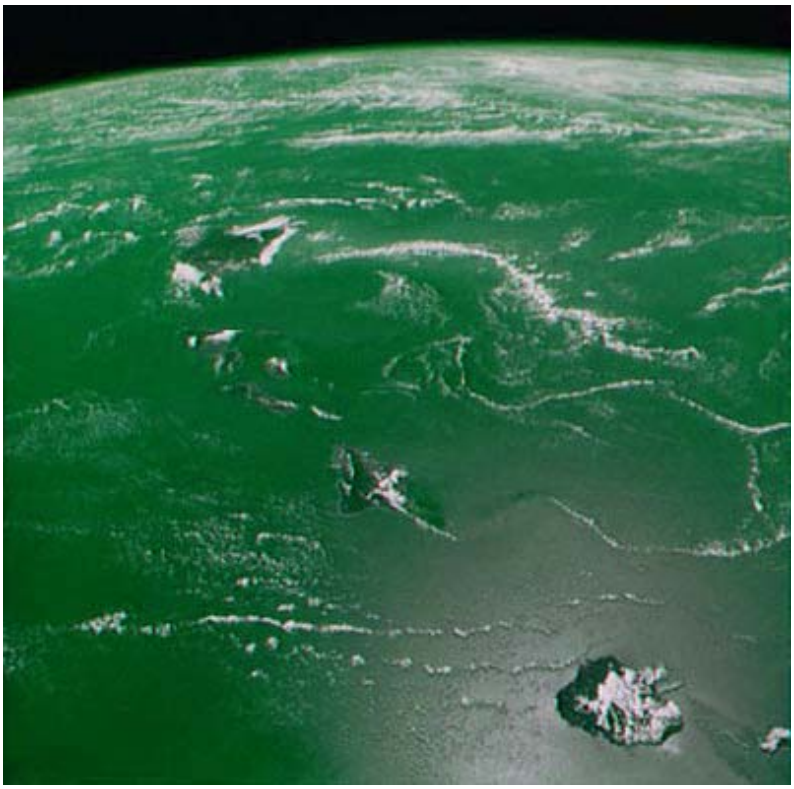
REPORT TO THE TWENTY-FIRST LEGISLATURE
STATE OF HAWAII
2002

Pursuant to
Section 342G-15 Hawaii Revised Statutes
Relating to Integrated Solid Waste Management



Prepared by:

STATE OF HAWAII
DEPARTMENT OF HEALTH
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1. INTRODUCTION

The Office of Solid Waste Management (OSWM), within the Environmental Management Division of the Department of Health (DOH), has permit authority over solid waste management facilities within the state. The permit process is intended to reduce environmental or public health impacts from solid waste management facilities.

Another function of the OSWM is to provide technical and programmatic assistance to the counties in their development of solid waste management and recycling programs. The legislature established a waste diversion goal of 50% by the year 2000 because it was accepted that recycling and waste reduction lead to reduced costs for taxpayers. The OSWM works to enhance the development of county and private recycling programs through a combination of statewide funding mechanisms and statewide guidance and mandates.

OSWM is required to provide an annual report to the legislature to describe the State's progress toward achieving the waste reduction goal. The report also contains general program information about OSWM programs and the counties' solid waste and recycling efforts.

2. WASTE REDUCTION GOAL AND DIVERSION RATES

3. Progress Toward Achieving the Waste Reduction Goal:

The State did not achieve the waste reduction goal of 50% by the year 2000. Although we are short of our goal, our current rate (FY 2001) is 27%, which is in line with the national rate, which is also 27%. The Environmental Protection Agency (EPA), which had a goal of 50% by the year 2000, has changed its posted goal to 35% by the year 2005, finding that states need a more realistic time frame in which to reach higher total waste reduction.

Recommendations made in the last Report to the Legislature, FY2000, included improvements to residential recycling programs and reinforcement of recycling programs in the workplace. While there has been some change in those areas, the OSWM continues to work toward these goals. Other areas for improvement are green waste recycling, and recycling and reuse of construction and demolition debris materials. On the Islands of Oahu and Maui, capture of these materials has increased significantly; however, substantial opportunity still exists for Kauai and the Big Island.

Some unique challenges exist for recyclers in the islands; most notably, the cost of shipping materials to the mainland, which we understand has increased over the last year. However, the continually decreasing value of recycled materials nationwide is causing an additional strain to recycling businesses. An increase in support for on-island recycled products is an important way to support our recyclers and local businesses that sell recycled content products.

2. Solid Waste Disposal and Diversion Rates:

The OSWM reports the recycling rate for each fiscal year by comparing reported volumes or weights of recovered materials to the amount of waste disposed by each county. We recognize that some inaccuracy exists within our rate. It is provided for measurement and discussion purposes.

In general, the figures used by the State do not conform with the EPA's proposed standards for municipal solid waste recycling measurement. Our rates include the diversion of metals and industrial waste from construction and demolition. Since the goal of the OSWM and most counties is diversion from landfilling, we track diversion of all materials.

The data shown is estimated by county, for comparison purposes. However, it is important to note that some recycling activity from neighbor islands is reflected in the Oahu totals since the recycler who ultimately brokers the material is located on Oahu. This will make the neighbor island rates appear lower than actual, to reduce the risk of "double counting" recycled materials which are shipped inter-island before their reuse.

Although the submittal of an annual report to OSWM is a condition of every solid waste management permit, several recyclers did not report diversion data for FY2001 prior to this report. Therefore, actual diversion data is higher than the figures shown. In addition, some generators of recyclable materials send their material to be recycled to a parent company on the mainland. Since the generator is not a permitted recycler, it is not required to report these volumes to our office, and are, therefore, not included in our diversion totals.

Also, since our rate is based on reported data, our rate is actually higher than posted. The OSWM is working on improving our data collection system so that our reports are able to reflect the actual amount of waste diversion accomplished by our state's recyclers.

Waste Diversion Numbers for FY2001

	Disposal (tons)	Diversion (tons)	Generation (tons)	State Diversion Rate
Hawaii	163,826	3,730.91	167,557	**2.23%**
Maui	157,541	77,514.17	235,056	**32.98%**
Oahu	802,930	352,656.88	1,155,587	**30.52%**
Kauai	77,162	5,018.75	82,181	**6.11%**
State	1,201,459	438,920.71	1,640,380	**26.76%**

Diversion data for fiscal years 1996 through 2000*:

FY	96	97	98	99	00 *
Oahu	24.5%	27%	26%	25.4%	20.2%
Maui	25%	26%	30%	25.7%	29.7%
Kauai	15%	7%	5%	4.4%	8.3%
Hawaii	17.5%	15%	5%	13.3%	7.2%
State	**23.5%**	**25%**	**24%**	**23.5%**	**19.7%**

***Large fluctuations reflect reporting lapses, rather than lapses in programs. No significant losses have occurred in the State's recycling programs that would be reflected in the data.

III. OSWM WASTE DIVERSION PROGRAMS

4. State Office Paper Recycling Program:

The State Office Paper Recycling Program as specified in HRS 342G-45 has been implemented in State offices on the Island of Oahu. At present, 14 buildings are participating in the program. A list of all participating buildings can be found in Appendix 1. The remaining state office buildings in the downtown area that are not part of the program already have an established recycling program in place. Other state buildings not in the downtown area, such as University of Hawaii at Manoa, will be added to the program in the future.

OSWM staff provided education and training to all offices upon request. Figures for the last year are provided on an estimation basis, as reporting of actual figures was only provided for four months out of the year. The following figures are based on the number of bins distributed (60), the average number of pickups (1/week), and the average weight of a full 96-gallon bin (190 lbs.):

State Office Recycling Program Results After One Year (Sept. 2000 to Aug. 2001)

Buildings Serviced	Total Bins	Full bin (Lbs.)	Estimated (Lbs.)	Reported (Lbs.)
14	55	190	543,400	121,615

Reported figures for recycled office paper on Oahu for FY2001 were 1,366,000 lbs. Using the estimated weight above, the program represents 39.7% of the total reported.

The OSWM is currently working with representatives of Department of Accounting and General Services (DAGS) on Maui, Kauai, and Hawaii Counties to get all state office buildings participating in the program. On Oahu, pickup is currently provided free of charge in return for the value of the material. The neighbor islands do not have the volume of paper that Oahu generates, so the recyclers would charge for pickup. We anticipate that the decreased cost of trash hauling charges would more than offset these costs.

5. Electronic Waste:

Used electronics account for a fast-growing component of the solid waste stream. About one third of all electronics are monitors that contain cathode ray tubes, or CRTs. CRTs can contain up to four pounds of lead per monitor. While many computers and other electronics are captured by reuse organizations, a significant amount is disposed of in the state's landfills. Plans to address this issue include wider education of existing reuse and recycling opportunities and statewide collection events.

There are a number of programs on the island of Oahu that reuse or refurbish computers for reuse. The OSWM is partnering with the City & County of Honolulu to run collection events aimed at capturing obsolete computers that may otherwise end up in the landfill. On the island of Maui, a twice-yearly collection event redistributes reusable computers to those in the community. Any obsolete or unusable computers are shipped to Oahu.

The OSWM has one permitted recycler on the island of Oahu that accepts obsolete computer equipment for a fee. The computers are shipped to a recycling facility on the mainland. The recycler can sell any reusable equipment, but obsolete equipment has little resale value at this time. This is a costly system and funding is essential before any aggressive steps can be made to prevent the public from disposing of electronics. Once a secure funding mechanism is in place, the OSWM would support a CRT landfill ban.

The OSWM is currently working on a State policy for electronic waste in conjunction with a statewide residential program. The program would be similar to the Office Paper Program, with building coordinators tasked with ensuring that all generated electronic waste from state office buildings are sent to a licenced recycler.

6. Affirmative Procurement:

As specified in HRS 342G-42, the OSWM, in coordination with the State Procurement Office (SPO), must ensure that all State and County purchasing agencies are provided with the

information and technical assistance necessary to promote the procurement of goods with recycled content. The OSWM is currently partnering with the Department of Business, Economic Development, and Tourism (DBEDT) and SPO on an Affirmative Procurement Program. Partially funded by the EPA, the program will include a survey of state offices to establish purchasing patterns that include or could include recycled content products. An additional survey will be sent to industries that may carry recycled content products. The output from the program will be a web page and printed publication of a list of products with recycled content available in Hawaii, a web page and publication listing Hawaii Statutes and resources, and a case study of successful Buy-Recycled efforts.

The OSWM is planning to use the research from this program to ensure compliance with EO 13101, which mandates that all projects using a minimum of $10,000 of federal funds use recycled content, as well as to support the State's recycled product procurement program.

7. Used Lead-Acid Battery Collection Program:

A three-month pilot project was implemented to determine the need for either a more widespread or prolonged collection program. Only used lead-acid batteries from householders, including automotive, motorcycle, and commercial size were collected. Collection was limited to the island of Oahu due primarily to limited funding and an unknown demand for battery pickup services.

The DOH, through OSWM, contracted with the Salvation Army, the only nonprofit organization contacted that was willing to participate in the collection program. The DOH issued a press release and also prepared stick-on labels that were affixed to the Salvation Army's regular mail-outs publicizing their donation collection program. The public was instructed to call the Salvation Army, where staff confirmed acceptable battery types, battery condition, and origin of the battery and scheduled a pickup time. Salvation Army staff referred customers to the City and County Household Hazardous Waste Program if the batteries were broken and/or leaking. Batteries were consolidated at the Salvation Army's central operations center, palletized and wrapped. Exide Corporation supplied the pallets and padding, and ultimately received the loads of batteries and shipped them out of state. One hundred eighty (180) batteries were collected during the program. The total cost for the pilot project was $2,540.00. Start up costs for equipment and training were $2,000.00, and the Salvation Army charged $3.00/battery. Exide Corporation accepted and shipped the batteries at no cost to the state.

HRS Chapter 342I-4 requires lead-acid battery retailers to accept one battery in exchange for every new battery sold. In addition, the cost of the new battery is to include the cost for disposal. Statewide, several retailers accept batteries from the public at no charge, and not necessarily dependent upon the purchase of a new battery. At least two retailers supplement the mandatory exchange program with a core charge which acts a deposit on the batteries. Individuals buying a battery without turning one in for recycling are charged a fee which is returned to the customer

upon turn-in of a used battery. Resident-generated lead-acid batteries are also accepted at most convenience centers and transfer stations throughout the state.

Last year, 615,000 vehicles were registered in the City and County of Honolulu. Assuming 20% of these vehicles had their batteries replaced during the year yields 123,000 used batteries. The amount of batteries collected through this program, if, averaged out for one year, would represent approximately six-tenths of one percent of that total. The OSWM also considers the very low number of complaints it receives for illegal disposal of batteries to be further indication of the relative insignificance of a battery disposal problem.

Because numerous free options already exist for residents to recycle their used car batteries, the OSWM recommends increasing outreach efforts to educate the public of available alternatives. The OSWM would consider continuing the battery collection program in the future. Additionally, the OSWM would consider supporting an industry-wide core charge that would further enhance the current battery exchange requirements.

For a more detailed report of the Battery Collection Program, please see Appendix 2.

8. Bottle Bill:

The OSWM believes that the proposed container deposit law, HB 1256, will significantly increase recovery of aluminum, glass, and plastic recyclable containers. Existing drop-off systems on Oahu and the neighbor islands are capturing approximately 20% of the available recyclable materials. Container deposit systems operating in 10 states around the country achieve 80% recovery on average. The law will also significantly reduce litter. Nationwide, beverage containers account for 40-60% of litter. In states with container deposits, beverage container litter has virtually disappeared. States with deposit laws report reductions in beverage container litter ranging from 69-83%. According to data from the Center for Marine Conservation, bottle and can debris make up 7% of beach litter in states with container deposit and 19% of beach litter in non-deposit states.

Container deposit systems also create jobs; net gains in employment have been shown in nearly every state with deposit systems. Based on the rate of new jobs created after the passage of beverage deposit legislation in other states, the OSWM estimates that 50 to 100 new jobs would be added to Hawaii's workforce.

A container deposit system would reduce costs of disposal, recycling and litter cleanup currently paid for by local government and taxpayers. In addition, Hawaii's tourist industry would benefit from an improved environmental image with cleaner roads, parks, and beaches and a visible demonstration of our local commitment to keep Hawaii a paradise.

OSWM supports the bottle bill, as the bill is consistent with the statutory goals of the program.

9. Glass Recycling:

The statewide glass recovery program is funded through an advance disposal fee collected at the state level. The statewide program affords flexibility to the counties in their program design and operation by providing annual funds for glass recovery. However, the new contracts taking effect on July 1, 2002, will ensure that recyclers will be receiving advance deposit fee (ADF) funds only after the glass reaches its end use or is proven to be shipped to an off island market with weight tickets. This will discourage stockpiling of glass and stimulate the reuse and recycling of the glass.

The fees are distributed to the counties based on the1990 census *de facto* population figures. The funds will be redistributed in the next contract schedule, based on the new census data. The redistribution should help make the funding system more accurate. However, the contractors continue to request additional funding to cover the costs of collecting and processing the glass. In addition, a slightly higher amount awarded to each county would enable a higher payout for drop-off, encouraging higher participation by the public. An increase in the ADF amount would enable the program to operate more effectively.

County glass reports for fiscal years 1996 through 2001:

	Oahu	Maui	Kauai	Hawaii	**Total Tons (reported)**
FY 01	10,355	1,956	470	960	**13,740**
FY 00	9,683	1,798	255	672	**12,408**
FY 99	9,525	1,588	400	--	**11,513**
FY 98	11,035	1,485	206	1,304	**14,030**
FY 97	10,198	1,384	349	1,297	**13,228**
FY 96	10,042	1,332	430	880	**12,684**

There has not been a significant increase in the amount of crushed glass used in road paving. However, other uses for crushed glass has increased over the last two years. Examples of such uses include sandblasting grit, backfill, and cesspool fill. Off-island shipping for the production of new glass products continues to be an important aspect of the glass recycling program.

The OSWM has again contracted the firm used in previous audits for the current year. The preliminary reports find no serious errors with the reporting and payments of the companies audited.

Payments and Expenditures of the Glass ADF Program:

Revenue - ADF Payments

FY	95	96	97	98	99	00	01
Amount	1,206,539	2,528,533	2,417,551	2,263,134	2,208,482	2,634,186	2,665,120

Expenditures - County Collection Program Funding

FY	96	97	98	99	00	01
Kauai	–	112,000	–	259,000	112,000	112,000
Hawaii	216,000	216,000	216,000	286,000	216,000	216,000
Maui	220,000	220,000	220,000	290,000	220,000	220,000
Oahu	1,475,000	1,875,000	1,925,000	1,525,000	1,600,000	1,600,000
Total	**1,911,000**	**2,423,000**	**2,361,000**	**2,360,000**	**2,148,000**	**2,148,000**

Expenditures - Educational & Promotional Efforts

FY	96	97	98	99	00	01
Kauai	5,000	–	6,000	167	–	–
Hawaii	5,000	5,000	6,000	333	–	–
Maui	5,000	5,000	6,000	180	–	–

Oahu	–	–	100,000	11,873	–	3,000
Total	**15,000**	**10,000**	**280,000**	**12,553**	**–**	**3,000**

Expenditures - Audit and Payment Administration

FY	**96**	**97**	**98**	**99**	**00**	**01**
C & C Administration	55,000	25,000	24,000	51,000	25,000	25,000
Auditors/Contractors	25,000	--	9,500	24,000	–	–
Total	**80,000**	**25,000**	**33,500**	**75,000**	**25,000**	**25,000**

4. Summary

The State of Hawaii did not reach its waste reduction goal of 50% by the year 2000. However, the recycling rate, which we use to compute our waste reduction figures, continues to grow. Improvements to existing programs, such as the glass advance disposal fee, will help to increase those figures further. The OSWM is also implementing new programs for waste reduction and diversion, such as Affirmative Procurement and electronic waste. Pilot projects like the Lead-Acid Battery Collection Program help to identify areas where the OSWM may not need to expend much time and resource, but where consumer "take back" programs have a positive effect. Introduced legislation, namely HB 1256, or the "bottle bill' is another way to keep valuable resources out of the state's landfills and streets.

Continued support of the county recycling and waste reduction programs will help to bring us to our goal even faster. This will be accomplished through partnerships between the OSWM and the counties, with projects such as the extension of the State Office Paper Recycling Program, and continued work on substantive changes, such as reductions in shipping fees for products bound for recycling.

Appendix 1

Participating buildings in the State Office Paper Recycling Program:

5. State Capitol
6. State Archives
7. Kamamalu Building
8. Capitol Center
9. Leiopapa A Kamehameha Building (State Office Tower)
10. Queen Liliuokalani Building
11. Kinau Hale
12. Kalanimoku Building
13. Department of Transportation
14. Keelikolani Building
15. Hale Auhau
16. Kapuaiwa Building
17. Kekuanao'a Building
18. No. 1 Capital District (Hemmeter Building)

Appendix 2

Department of Health / Salvation Army Adult Rehabilitation Center
Used Lead-Acid Battery Collection Program Report
April - June 2001

Program Goals

- Collection of used lead-acid batteries from householders to include automotive, motorcycle, and commercial size batteries for the island of Oahu.
- Estimate the community's long-term need for such a collection program

Program Development

Because of its lack of equipment to directly collect batteries, the DOH, through OSWM, sought out a partnership with nonprofit groups. Organizations such as the Salvation Army, Goodwill Industries, and Big Brothers/Big Sisters have established donation collection mechanisms in place. The DOH sought to use these existing systems to collect the batteries.

Preliminary discussions with two nonprofits resulted in their deciding not to participate in the project due to liability and safety concerns. The Salvation Army was the only nonprofit organization willing to participate in the collection program.

The program was limited to the island of Oahu due primarily to limited funding, and an unknown demand for battery pickup services. The program was a pilot project that the DOH would use in determining the latent demand for either a more widespread or prolonged collection program.

Program Description

The public was instructed to call the Salvation Army to make appointments for battery pickups. Salvation Army staff confirmed acceptable battery types, battery condition, and origin of the battery before setting pickup time.

Only automotive, marine, and motorcycle lead-acid batteries in good condition were accepted for pickup. Salvation Army staff referred

customers to the City and County Household Hazardous Waste Program if the batteries were broken and/or leaking. Battery collection from businesses was excluded from the program. Rechargeable Ni-CAD and alkaline batteries were also excluded.

Scheduling of pickups was left to the discretion of the Salvation Army staff to be coordinated with their regular collection schedules. Since their normal collection schedules were set up to cover the entire island in relatively short time cycles, timeliness of battery pickups was not a problem.

Once collected, the batteries were consolidated at the Salvation Army's central operations center on Nimitz Highway. After a specified amount of batteries were collected, they were palletized and plastic wrapped according to Exide Battery Corp. instructions. Pallets and padding material were supplied by Exide. The batteries were then taken to Exide's facility in Campbell Industrial Park for shipment out of state.

Advertising
The Department of Health issued a press release announcing the program. The report was picked up and carried by the daily circulation newspapers. The DOH also prepared stick-on labels announcing the program that were affixed to the Salvation Army's regular mail-outs publicizing their donation collection program.

Cost

Project Start-up (Equipment, training, etc.)	**$2,000.00**
Batteries collected @ $3.00/motorcycle/car battery = 180 batteries	**$ 540.00***
Total Cost:	**$2,540.00****

* In addition to start-up costs, payment to the Salvation Army was based on a rate of $3.00 per battery collected.

** Total costs were payments to Salvation Army. Exide accepted the batteries at no charge to the State.

Discussion/Conclusion

The Salvation Army reported that requests for battery pickup were received evenly throughout the battery collection period. Requests were evenly

distributed around Oahu with no areas showing higher or lower concentrations.

Hawaii Revised Statutes, Chapter 342I requires battery retailers to take one battery in exchange for every new battery sold. On Oahu, batteries are accepted at all City and County of Honolulu Refuse Convenience Centers. Also, several statewide retailers accept batteries from the public at no charge without requiring the purchase of a new battery. At least two retailers supplement the mandatory exchange program by instituting a core charge which acts as a deposit on the batteries. Individuals buying a battery, but not immediately turning one in for recycling, are charged a fee that is returned to the customer upon turn-in of a used battery.

Anecdotal information from callers seemed to indicate that many of the batteries were disposed due to the clean-out of home storage areas. This information,
combined with the widespread availability of free recycling options, seems to indicate that the majority of at-large batteries are likely older ones that pre-date enactment of the battery exchange requirement for retailers. The OSWM believes that the vast majority of batteries are being properly handled, and the numbers seem to bear this out.

In the year 2000, there were 615,000 vehicles registered in the City and County of Honolulu. Assuming 20% of these vehicles had their batteries replaced during the year yields 123,000 used batteries. The amount of batteries collected through this program, if, averaged out for a one year period, represents approximately six-tenths of one percent of that total. The OSWM also considers the very low number of complaints it receives for illegal disposal of batteries to be further indication of the relative insignificance of a battery disposal problem.

Because numerous free options already exist for residents to recycle their used car batteries, the OSWM recommends increasing outreach efforts to educate the public of available alternatives. The OSWM would consider continuing the battery collection program in the future. Additionally, the OSWM would consider supporting an industry-wide core charge that would further enhance the current battery exchange requirements.